

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1. (Previously Presented) A method for enabling establishment of a connection between a node of a private domain and a node of a public domain through an intermediate communication gateway having a pool of public-domain gateway addresses for public-domain representation of private-domain nodes, said method comprising the steps of:

centrally allocating by the intermediate communication gateway, in response to a configuration request initiated from the private-domain node, a public-domain gateway address from said pool of gateway addresses and a private-domain port number for the private-domain node;

wherein said step of centrally allocating comprises the step of identifying, based on predetermined connection information derivable from said configuration request, a public-domain gateway address and a private-domain node port number that in combination with said predetermined connection information define a public-domain gateway state representation that has no counterpart in any existing gateway connection state;

initiating establishment of said connection by the intermediate communication gateway at least partly based on the allocated public-domain gateway address and private-domain node port number; and

transmitting the allocated public-domain gateway address and private-domain node port number from the intermediate communication gateway to the requesting private-domain node in a configuration reply.

2. (Previously Presented) The method according to claim 1, wherein said predetermined connection information includes at least one of public-domain node address information and public-domain node port information.

3. (Previously Presented) The method according to claim1, wherein a gateway connection state is established in said gateway based on said public-domain gateway state representation and a representation of a private-domain routing path between said gateway and said private-domain node.

4. (Previously Presented) The method according to claim 1, wherein the allocated public-domain gateway address and private-domain node port number are represented by an allocated socket domain address and a source port number, and the predetermined connection information includes a destination domain address and a destination port number, and the public-domain gateway state representation is defined by a unique set of socket parameters including the allocated socket domain address and source port number, the destination domain address and the destination port number.

5. (Original) The method according to claim1, wherein said configuration reply is a DNS (Domain Name Server) reply.

6. (Previously Presented) The method according to claim 5, wherein said allocated public-domain gateway address and private-domain node port number are conveyed in a dedicated DNS record in said DNS reply.

7. (Previously Presented) The method according to claim 1, further comprising the step of the private-domain node configuring a communication interface according to said allocated public-domain gateway address and private-domain node port number.

8. (Previously Presented) The method according to claim 1, further comprising the step of establishing a private-domain routing path between said gateway and said private-domain node.

9. (Previously Presented) A system for enabling establishment of a connection between a node of a private domain and a node of a public domain through an intermediate communication gateway having a pool of public-domain gateway addresses for public-domain representation of private-domain nodes, said system comprising:

means within the intermediate communication gateway for centrally allocating, in response to a configuration request initiated from the private-domain node, a public-domain gateway address from said pool of gateway addresses and a private-domain node port number for the private-domain node;

wherein said means for centrally allocating comprises means for identifying, based on predetermined connection information derivable from said configuration request, a public-domain gateway address and a private-domain node port number that in combination with said predetermined connection information define a public-domain gateway state representation that has no counterpart in any existing gateway connection state;

means within the intermediate communication gateway for initiating establishment of said connection at least partly based on the allocated public-domain gateway address and private domain node port number; and

means for transmitting the allocated public-domain gateway address and private-domain node port number from the intermediate communication gateway to the requesting private-domain node in a configuration reply.

10. (Previously Presented) The system according to claim 9, wherein said predetermined connection information includes at least one of public-domain node address information and public-domain node port information.

11. (Previously Presented) The system according to claim 9, wherein a gateway connection state is established in said gateway based on said public-domain gateway state representation and a representation of a private-domain routing path between said gateway and said private-domain node.

12. (Previously Presented) The system according to claim 9, wherein the allocated public-domain gateway address and private-domain node port number are represented by an allocated socket domain address and a source port number, and the predetermined connection information includes a destination domain address and a destination port number, and the public-domain gateway state representation is defined by a unique set of socket parameters including the allocated socket domain address and source port number, the destination domain address and the destination port number.

13. (Original) The system according to claim 9, wherein said configuration reply is a DNS (Domain Name Server) reply.

14. (Previously Presented) The system according to claim 13, wherein said allocated public-domain gateway address and private-domain node port number are conveyed in a dedicated DNS record in said DNS reply.

15. (Previously Presented) The system according to claim 9, further comprising means for establishing a private-domain routing path between said gateway and said private-domain node.

16. (Previously Presented) A gateway resource manager for a communication gateway, said communication gateway having a pool of public-domain gateway addresses for public-domain representation of private-domain nodes, said gateway resource manager comprising:

means for centrally allocating, in response to a configuration request initiated from one of the private-domain nodes, a public-domain gateway address from said pool

of gateway addresses and a private-domain node port number to be used in establishing a gateway connection state for a flow between the private-domain node and a public-domain node;

wherein said allocating means comprises means for identifying, based on predetermined connection information, a public-domain gateway address and a private-domain node port number that in combination with said predetermined connection information define a public-domain gateway state representation that has no counterpart in any existing gateway connection state;

means for initiating establishment of said gateway connection state at least partly based on the allocated public-domain gateway address and private domain node port number; and

means for transmitting the allocated public-domain gateway address and private-domain node port number to said private-domain node.

17. (Previously Presented) The gateway resource manager according to claim 16, wherein said predetermined connection information includes at least one of public-domain node address information and public-domain node port information.

18. (Previously Presented) The gateway resource manager according to claim 16, wherein the allocated public-domain gateway address and private-domain node port number are represented by an allocated socket domain address and a source port number, and the predetermined connection information includes a destination domain address and a destination port number, and the public-domain gateway state representation is defined by a unique set of socket parameters including the allocated socket domain address and source port number, the destination domain address and the destination port number.

19. (Previously Presented) The gateway resource manager according to claim 16, wherein said means for initiating establishment of said gateway connection state comprises means for requesting that said gateway establishes a gateway connection state based on the public-domain gateway state representation and a

representation of a private-domain routing path between said gateway and said private-domain node.

20. (Previously Presented) The gateway resource manager according to claim 16, wherein said allocating means performs allocation in response to a configuration request initiated from the private-domain node, and said transmitting means transmits the allocated public-domain gateway address and private-domain node port number to the private-domain node in a configuration reply.

21. (Original) The gateway resource manager according to claim 20, wherein said configuration reply is a DNS (Domain Name Server) reply.

22. (Previously Presented) The gateway resource manager according to claim 21, wherein said allocated public-domain gateway address and private-domain node port number are conveyed in a dedicated DNS record in said DNS reply.

23. (Previously Presented) A method of configuring a private-domain communication node for communication with a public-domain communication node via a communication gateway having a pool of public-domain gateway addresses for public-domain representation of private-domain nodes, said method comprising the steps of:

centrally allocating by the intermediate communication gateway, a public-domain gateway address from said pool of gateway addresses and a private-domain node port number in response to a configuration request initiated from the private-domain node;

wherein said step of centrally allocating comprises the step of identifying, based on predetermined connection information, a public-domain gateway address and a private-domain node port number that in combination with said predetermined connection information define a public-domain gateway state representation that has no counterpart in any existing gateway connection state;

transmitting the allocated public-domain gateway address and private-domain node port number from the intermediate communication gateway to the private-domain node; and

configuring the private-domain communication node according to the allocated public-domain gateway address and private-domain node port number.

24. (Previously Presented) A private-domain communication terminal arranged for communication with any of a number of public-domain hosts via a communication gateway having a pool of public-domain gateway addresses for enabling public-domain representation of inside-realm communication terminals, said communication terminal comprising:

means for requesting from the communication gateway, in a modified DNS (Domain Name Server) query, central configuration information for communication with a selected one of the public-domain hosts, wherein the central configuration information is centrally allocated by the communication gateway;

means for receiving a DNS configuration reply including a centrally allocated public-domain gateway address and a centrally allocated private-domain terminal port number, said centrally allocated public-domain gateway address and said centrally allocated private-domain terminal port number being arranged in a dedicated DNS record in said configuration reply; and

means for configuring a communication interface according to the public-domain gateway address and said private-domain terminal port number.